

REMARKS

In view of the above amendments and the following remarks, reconsideration of the outstanding office action is respectfully requested.

The objection to claims 2 and 27 is obviated in view of the above amendments. Specifically, claim 2 has been amended to replace "the said" with "said", and claim 27 has been amended to remove the phrase "wherein the or each abutment surface."

The rejection of claims 1, 2, 4, 5, 8, 9, 21, 23-25, and 28 under 35 U.S.C. § 112 (2nd para.) for indefiniteness is respectfully traversed. Specifically, claim 1 has been amended to further clarify the meaning of the claim and to provide antecedent basis for the "longitudinal edge region" limitation in claim 2. Claims 4, 8, 9, 23-25, and 28 have been amended to remove the term "its." The phrase "is also in the form of a channel and" has been deleted in claim 5. Claim 21 has been canceled.

The rejection of claims 1-6 and 10-16 under 35 U.S.C. § 103(a) for obviousness over U.S. Patent No. 5,373,678 to Hesser et al. ("Hesser") in view of U.S. Patent No. 3,760,548 to Sauer et al. ("Sauer") is respectfully traversed in view of the above amendments and the following remarks.

Hesser discloses a structural wall apparatus including a plurality of building panels disposed in edge to edge relationship and a plurality of panel connecting fasteners attaching the panels together. Each panel has outer and inner metal skins spaced by an intermediate insulating core and has at least one interlocking edge. The interlocking edge of each panel has a metal lined tongue and a metal lined groove shaped for each metal tongue to fit into opposing grooves on abutting panels for interlocking the panels together. Each panel has an elongated reinforcing member positioned adjacent the interlocking edge of the panel and having a channel formed therein shaped to fit around the metal lined groove portion and having a skin attaching flange on one side for attaching the reinforcing member to the metal skin and a strengthening flange portion on the other side of the metal lined groove. The panel connecting fasteners attaches the panels together by having one elongated fastener passing through the panel skin and through the elongated reinforcing member skin attaching flange and through the reinforcing member channel and through the metal lined groove and the metal lined tongue of the second panel and through the elongated reinforcing member strengthening flange on the other side of the metal lined groove to provide greater strength to

the connecting edges of the attached panels. Additional fasteners attach the panels to a frame and also attach the elongated reinforcing member to the metal skin of a panel.

Sauer discloses a building panel having a plurality of interlocked side-by-side panels. Each panel includes spaced, parallel front and rear sheets having therebetween an insulating, rigid core element bonded to the inside surface of the sheets. One edge of each panel is provided with a pair of spaced grooves having a recessed male member therebetween. The other edge of each panel is provided with an edge portion of reduced thickness and an end formed by a channel to form a female member into which a recessed male member of an adjoining panel may project, the outwardly projecting flanges of the channel being received by the spaced grooves on either side of the recessed male member of the adjoining panel.

As amended, the claims of the present application are directed to a "building panel of sandwich construction comprising a core and spaced metal sheets fixed to opposite major faces of said core, said core including opposite end edges which extend between said opposite major faces thereof, said panel having opposite major surfaces and opposite longitudinal edge regions . . . wherein at least one of said metal sheets has a paper covering bonded thereto so that said metal sheet forms one of the major surfaces of the panel, wherein the paper covering provides a surface characteristic that enables said major surfaces of the panel to be finished to appear continuous by using finishing techniques, wherein the panel is configured such that the major surfaces of the interconnected panels incorporating the paper covering are aligned and in substantially abutting relationship to form a continuous surface, wherein said finishing techniques are applied to the major surfaces of the interconnected panels."

Hesser does not teach or suggest a building panel that has spaced metal sheets having "a paper covering bonded thereto" as required by the claims of the present invention. While acknowledging on page 5 of the outstanding office action that Hesser does not disclose a "paper covering," the U.S. Patent and Trademark Office ("PTO") cites Sauer for teaching a building panel having sheets with a paper covering. However, nowhere in Sauer is there any disclosure of a paper covering bonded to metal sheets. Sauer only discusses that the sheets of the disclosed building panel may be formed of sheet metal and provided with prefinished architectural faces. Although the PTO asserts that a paper covering is a prefinished architectural face, there is no teaching in Sauer that the prefinished architectural face is a

paper covering. Moreover, the paper covering of the present invention is not "prefinished," but is rather structured to be finished using conventional finishing techniques. Thus, Sauer cannot overcome the above-noted deficiencies of Hesser.

In addition, neither Hesser nor Sauer, either alone or in combination, discloses or suggests a building panel including spaced metal sheets having a paper covering bonded thereto, where the paper covering provides a surface characteristic that enables the major surfaces of the panel to be finished to appear continuous by using finishing techniques, as required by the claims of the present invention. The building panel disclosed in the present invention, as claimed, can be used in exactly the same way as plasterboard to obtain a continuous exposed surface. As discussed on page 2, lines 18-21 of the specification, a particular advantage of the building panel disclosed in the present invention is that the surface of the wall formed by the panels can be finished to appear continuous using conventional finishing techniques used on plasterboard walls, such as plaster rendering and the use of plaster tape. This functionality is provided by the structure of the paper covering which is designed to be finished by using conventional finishing techniques.

There is no teaching or suggestion in Hesser of building panels where a paper covering is bonded to metal sheets which would allow a continuous surface to be obtained by applying conventional finishing techniques. The metal skins disclosed in Hesser are not suitable for applying conventional finishing techniques to conceal the joint between the abutting panels. For example, one of the standard techniques for finishing wall surfaces is plaster rendering. However, plaster cannot be applied directly to the metal skins of Hesser, and the metal skin surfaces cannot be sanded in the same way a paper surface can be sanded. Furthermore, the building panels of Hesser include a plurality of panel connecting fasteners 41, 43, 46, and 47 for attaching the panels together, as shown in Figure 5. These fasteners extend from the external surface of the metal skins and interconnect the panels. Such a building panel design with fasteners would preclude one from obtaining the smooth, finished surface achieved by the present invention. The structural wall disclosed in Hesser is mainly directed to an insulated wall structure where the characteristic of its surface is of little significance. There is also no teaching or suggestion in Sauer of building panels where a paper covering is bonded to metal sheets which would allow a continuous surface to be obtained by applying conventional finishing techniques. Sauer is specifically directed to a building panel construction made up of a plurality of side-by-side panels having interlocking

and telescoping joints therebetween in which the edges of abutting panels are spaced apart which permit limited movement for ease and economy of erection and allow for variations in alignment and for expansion and contraction of the sheets from temperature changes. The building panels of Sauer have a visible joint between the interlocked panels which needs to be able to accommodate relative movement of the panels and, thus, can not be concealed by conventional finishing techniques. Accordingly, Sauer teaches away from providing a continuous surface from the interconnected panels and, thus, teaches away from the present invention, as claimed. The combination of Hesser and Sauer, therefore, also fails to teach or suggest a "building panel of sandwich construction comprising a core and spaced metal sheets fixed to opposite major faces of said core, said core including opposite end edges which extend between said opposite major faces thereof, said panel having opposite major surfaces and opposite longitudinal edge regions . . . wherein at least one of said metal sheets has a paper covering bonded thereto so that said metal sheet forms one of the major surfaces of the panel, wherein the paper covering provides a surface characteristic that enables said major surfaces of the panel to be finished to appear continuous by using finishing techniques, wherein the panel is configured such that the major surfaces of the interconnected panels incorporating the paper covering are aligned and in substantially abutting relationship to form a continuous surface, wherein said finishing techniques are applied to the major surfaces of the interconnected panels," as required by the claims of the present invention.

Since Hesser and Sauer, either alone or in combination, fail to teach or suggest each and every limitation of the claimed invention, applicant submits that the rejection under 35 U.S.C. § 103(a) is improper and should be withdrawn.

The rejection of claim 7 under 35 U.S.C. § 103(a) for obviousness over Hesser in view of Sauer and further in view of U.S. Patent No. 4,744,185 to Lamberet et al. ("Lamberet") is respectfully traversed.

As noted above, neither Hesser nor Sauer teaches or suggests a "building panel of sandwich construction comprising a core and spaced metal sheets fixed to opposite major faces of said core, said core including opposite end edges which extend between said opposite major faces thereof, said panel having opposite major surfaces and opposite longitudinal edge regions . . . wherein at least one of said metal sheets has a paper covering bonded thereto so that said metal sheet forms one of the major surfaces of the panel, wherein the paper covering provides a surface characteristic that enables said major surfaces of the

panel to be finished to appear continuous by using finishing techniques, wherein the panel is configured such that the major surfaces of the interconnected panels incorporating the paper covering are aligned and in substantially abutting relationship to form a continuous surface, wherein said finishing techniques are applied to the major surfaces of the interconnected panels," as recited in claim 1. Therefore, claim 7, which depends on claim 1, cannot have been rendered obvious over Hesser or Sauer.

Lamberet is cited for teaching a snap fit connection between panels. However, since Lamberet does not disclose or suggest a paper covering bonded to metal sheets, it does not cure the above-noted deficiencies of Hesser and Sauer.

For this reason, the rejection of claim 7 for obviousness is improper and should be withdrawn.

The rejection of claim 9 under 35 U.S.C. § 103(a) for obviousness over Hesser in view of Sauer and further in view of U.S. Patent No. 5,860,693 to Ehrlich ("Ehrlich") is respectfully traversed.

As noted above, neither Hesser nor Sauer teaches or suggests a "building panel of sandwich construction comprising a core and spaced metal sheets fixed to opposite major faces of said core, said core including opposite end edges which extend between said opposite major faces thereof, said panel having opposite major surfaces and opposite longitudinal edge regions . . . wherein at least one of said metal sheets has a paper covering bonded thereto so that said metal sheet forms one of the major surfaces of the panel, wherein the paper covering provides a surface characteristic that enables said major surfaces of the panel to be finished to appear continuous by using finishing techniques, wherein the panel is configured such that the major surfaces of the interconnected panels incorporating the paper covering are aligned and in substantially abutting relationship to form a continuous surface, wherein said finishing techniques are applied to the major surfaces of the interconnected panels," as recited in claim 1. Therefore, claim 9, which depends on claim 1, cannot have been rendered obvious over Hesser or Sauer.

Ehrlich is cited as teaching the major surface of the panel having a recess adjacent to the edge regions. However, since Ehrlich does not disclose or suggest a paper covering bonded to metal sheets, it does not cure the above-noted deficiencies of Hesser and Sauer.

For this reason, the rejection of claim 9 for obviousness is improper and should be withdrawn.

The rejection of claims 19, 20, and 26 under 35 U.S.C. § 103(a) for obviousness over Lamberet in view of Hesser is respectfully traversed.

As amended, the claims of the present application are directed to a "building system including a building panel and a separate reinforcing element, the building panel comprising a core and having spaced metal sheets fixed to opposite major faces of said core . . . said panel having opposite major surfaces and longitudinal edge regions, said metal sheets including opposite edge regions which form longitudinal edge regions of the panel, wherein said edge regions extend inwardly of said opposite major surfaces of said panel and across each end edge of said core to provide for interconnection of the panel with another panel . . . and each edge region of the panel is profiled to form a pair of connecting elements which extend across the end edges of said core, the connecting elements of the longitudinal edge regions of the panel being adapted to interfit with the connecting element of a respective one of the longitudinal edge regions of another panel, each connecting element being formed as either a channel or a projection which cooperate to interfit, each channel incorporating opposite walls interconnected by a substantially flat base portion, and wherein each projection is shaped to interfit with the channel of said another panel and includes opposite walls interconnected by a substantially flat bridging portion, the panel being configured such that the major surfaces of the interconnected panels are aligned and in substantially abutting relationship to form a substantially continuous surface and wherein the reinforcing element is operative to be installed at a joint formed on connection of the panel with said another panel and is secured in place by locating said reinforcing element between and in connection with the interfitting connecting elements of each panel to conceal the reinforcing element which is operative to improve the load bearing characteristics of the interconnected panels and wherein said reinforcing element includes at least one engagement part which is generally U-shaped and located between said interfitting channel and projection of the interconnected panels."

Lamberet discloses an edge profile for an insulating panel adapted to be interlocked with identical panels to form an insulated enclosure. A generally S-shaped profile member which defines the entire edge of the panel has on its outwardly facing side (i.e. facing the adjoining panel), a groove and a rib formed side-by-side and playing the role

of mortise and tenon, respectively, for interlocking with an inversely turned, but identical edge strip of the adjoining panel. An inwardly extending fold 12 of the profile member 2 is designed to receive a right angle bend 3'b or 4'b of the respective metal sheet 3b, 4b, along the same side of the panel, so that the metal sheet and the respective profile member is interengaged. The two profiled members of opposite edges of the panel are disposed in inverse relationship to one another so that a first end of one panel can interlock with the second end of the second panel and vice versa. Thus, the panels in Lamberet rely on the profile members 2, which are engaged to the metal sheets 3b, 4b, to provide the interconnection between adjacent panels, and do not have any interconnecting elements that are formed by the metal sheets having edge regions extending inwardly of the opposite major surfaces of the panel, as required by claims 19 and 26 of the present invention. Lamberet also does not disclose or suggest a reinforcing element, as required by claims 19 and 26 of the present invention.

Hesser discloses a structural wall apparatus including a plurality of building panels disposed in edge to edge, where each panel has outer and inner metal skins spaced by an intermediate insulating core and has at least one interlocking edge. The interlocking edge of each panel has a metal lined tongue and a metal lined groove shaped for each metal tongue to fit into opposing grooves on abutting panels for interlocking the panels together. Each panel has an elongated reinforcing member positioned adjacent the interlocking edge of the panel and having a channel formed therein shaped to fit around the metal lined groove portion and having a skin attaching flange on one side for attaching the reinforcing member to the metal skin and a strengthening flange portion on the other side of the metal lined groove. However, Hesser does not teach or suggest a building system including a building panel and a separate reinforcing element where the reinforcing element is secured in place by locating the reinforcing element between the interfitting connecting elements to conceal the reinforcing member which is operative to improve the load bearing characteristics of the interconnected panels, as recited by claims 19 and 26 of the present invention. Although Hesser discloses a reinforcing member, the reinforcing member 25 is positioned to fit around the metal lined groove 18 in the back (see Figure 2), and not located between the interfitting connecting elements, as required by the claims. Therefore, Hesser cannot overcome the deficiencies of Lamberet.

Accordingly, applicant submits that the rejection under 35 U.S.C. § 103(a) is improper and should be withdrawn.

The rejection of claims 27-31 under 35 U.S.C. § 103(a) for obviousness over Lamberet in view of Hesser and further in view of Sauer is respectfully traversed.

As noted above, neither Lamberet nor Hesser teaches or suggests a building system including a building panel and a separate reinforcing element where the reinforcing element is secured in place by locating the reinforcing element between the interfitting connecting elements to conceal the reinforcing member which is operative to improve the load bearing characteristics of the interconnected panels, as recited by claim 19 of the present invention. Therefore, claims 27-31, which depend on claim 19, cannot have been rendered obvious over Lamberet or Hesser.

Sauer is cited as teaching an abutment surface extending generally perpendicular to the major surfaces of the panel and disposed between a major surface of the panel and the connecting elements. Sauer is also cited as teaching a paper covering as well as disposing the architectural finish on the metal sheets. However, it does not cure the above-noted deficiencies of Lamberet and Hesser.

For this reason, the rejection of claims 27-31 for obviousness is improper and should be withdrawn.

In view of the all of the foregoing, applicants submit that this case is in condition for allowance and such allowance is earnestly solicited.

Respectfully submitted,

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August 4, 2003 Ruth R. Smith
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